

Feature

- Precision MEMS process
- High performance, shielded, Micro-cavity structure
- Silicon substrate, 50Ω CPW output
- Au wire bonding, for MCM applications

Environmental Specifications

Operating Temperature	-55°C~+85°C
Storage Temperature	-55°C~+125°C
Max. Input Power	35dBm

Electrical Specifications(T_A=+25°C)

Parameter	Min.	Typ.	Max.	Unit
Center Freq. (f ₀)	-	5	-	GHz
Pass Band	4.5	-	5.5	GHz
Ripple in Pass band	-	-	1	dB
Insertion Loss @ f ₀	-	-	3	dB
Return Loss	15	-	-	dB
Out of band	≥ 30@3.85GHz&6.15GHz			dB
	≥ 40@3.7GHz&6.2GHz			dB
Attenuation	≥ 60@DC~3GHz			dB
	≥ 55@8~12GHz			dB
Group Delay Variation	≤ 0.5@4.5~5.5GHz			ns
Linear Phase	≤ ±10@4.5~5.5GHz			°

S2P file name: SiMF5_1-7D1.s2p

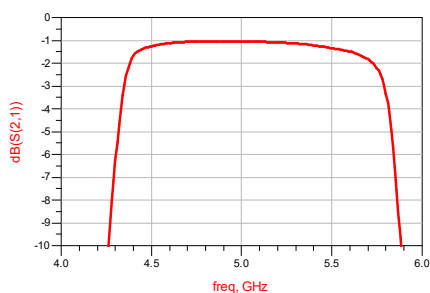
Outline Drawing



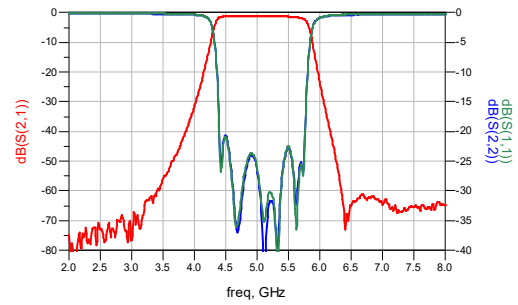
Symbol	Value (mm)		
	Min.	Nominal	Max.
A	6.9	-	7.0
B	5.6	-	5.7

Typical Test Curves

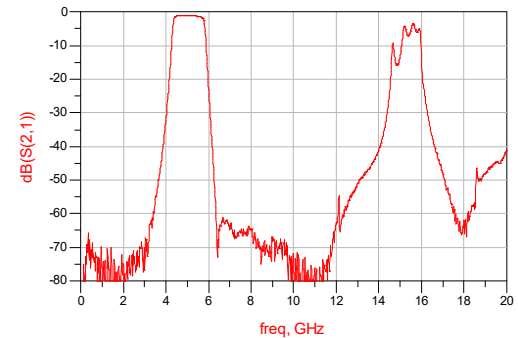
Insertion Loss VS Frequency (T_A=25°C)



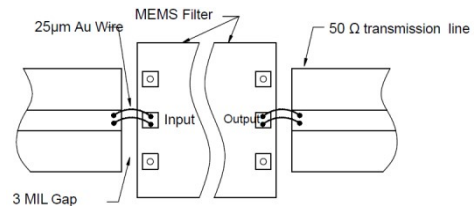
Insertion Loss & Return Loss VS Frequency (T_A=25°C)



Broadband Insertion Loss VS Frequency (T_A=25°C)

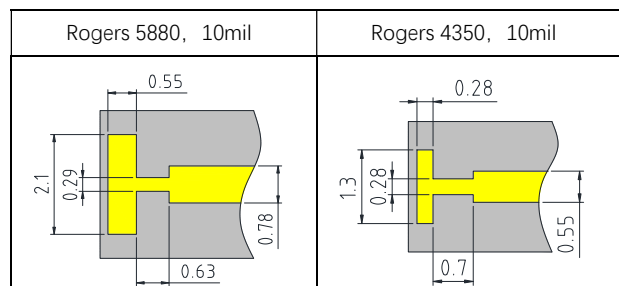


Recommended Assembly Diagrams



Application Notes:

1. The chip is back-metalized and can be die mounted with AuSn eutectic performs or with electrically conductive epoxy (for example ME8456).
2. The die should be assembled on carriers like Kovar or Mu-Cu which have same Coefficient of thermal expansion. (2.9ppm/°C) with Silicon, thickness 0.2mm max.
3. Handle the chips in a clean environment. DO NOT attempt to clean the chip using liquid cleaning systems.
4. Handle the chip along the edges with a vacuum collet or with a sharp pair of bent tweezers.
5. Recommended to use T structure as below for bonding.



6. If you have any questions, please contact us.